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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,024	03/12/2002	Kimihiro Yoshizako	PL-9937	4573
22840	7590	12/19/2003	EXAMINER	
AMERSHAM BIOSCIENCES PATENT DEPARTMENT 800 CENTENNIAL AVENUE PISCATAWAY, NJ 08855			THERKORN, ERNEST G	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/018,024	<b>Applicant(s)</b> YOSHIZAKO ET AL.	
	<b>Examiner</b> Ernest G. Therkorn	<b>Art Unit</b> 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 20 November 2003.

2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-7 and 9-11 is/are pending in the application.

4a) Of the above claim(s) 9 is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-7, 10 and 11 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
     a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) <input type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____
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Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "(P)ackaging" is considered to render the claim indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 10-11 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957. The claims are considered to read on each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957. However, if a difference exists between the claims and each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653

including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957, it would reside in optimizing the elements of each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957. It would have been obvious to optimize the elements of each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 to enhance separation.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 in view of Mikes' Laboratory Handbook of Chromatographic and Allied Methods 1979, pages 388-390. At best, the claim differs from each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 in reciting use a spacer. Mikes' Laboratory Handbook of Chromatographic and Allied Methods 1979, pages 388-390 discloses that a spacer makes a ligand more accessible to its target substance. It would have been obvious to use a spacer in each of JP 09-049830 including the MAT translation of JP 09-049830,

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JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 because Mikes' Laboratory Handbook of Chromatographic and Allied Methods 1979, pages 388-390 discloses that a spacer makes a ligand more accessible to its target substance.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 in view of each of JP 08-103653 including the PTO translation of JP 08-103653 and JP 09-049830 including the MAT translation of JP 09-049830 and Hosoya (Anal. Chem. 1995,67, 1907-1922). At best, the claim differs from each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 in reciting use of epoxy and use of uniformly sized particles. Each of JP 08-103653 including the PTO translation of JP 08-103653 (page 9, lines 7-10) and JP 09-049830 including the MAT translation of JP 09-049830 (page 15, lines 1-9) discloses epoxy allows connection of the ligand. Hosoya (Anal. Chem. 1995,67, 1907-1922) (Abstract) discloses that uniformly sized polymer based packing materials separate faster with better resolution. It would have been obvious to use epoxy and uniformly size particles in each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO

translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 because each of JP 08-103653 including the PTO translation of JP 08-103653 (page 9, lines 7-10) and JP 09-049830 including the MAT translation of JP 09-049830 (page 15, lines 1-9) discloses epoxy allows connection of the ligand and Hosoya (Anal. Chem. 1995,67, 1907-1922) (Abstract) discloses that uniformly sized polymer based packing materials separate faster with better resolution.

The remarks urge that "packaging" is definite because page 14, line 23 of the instant specification uses the word "packing". However, "packaging material" and "packing material" are distinct concepts. The art recognized term "packing material" does not make "packaging material" definite.

The remarks urge that each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 do not show the claimed invention. However, claim 1 merely recites that the stimulus responsive polymer and the affinitive substance (ligand) are independently attached to the support matrix. This is shown in JP 09-049830 including the MAT translation of JP 09-049830 in claim 2 on page 3 of the translation and in paragraph 27 bridging pages 16 and 17 of the translation. This is shown in JP 08-103653 including the PTO translation of JP 08-103653 in Working Example 1 on page 10, lines 18-20 of the translation. CD4 antibody and stimulus response type separating material were separately coated on the base material. This is shown in JP

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07-136505 including the PTO translation of JP 07-136505 in Working Example 1 on page 8, lines 11, 12, 16, 17, and 20 of the translation. The stimulus response type material was attached to the base by plasma discharge and the avidin was subsequently bound to the combination of the base material and stimulus response type material. This is shown in JP 07-135957 including the PTO translation of JP 07-135957 in Working Example 1 on page 8, lines 13, 14, 18, and 19 of the translation. The stimulus response type material was attached to the base by plasma discharge and the CD34 antibody was subsequently bound to the combination of the base material and stimulus response type material.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

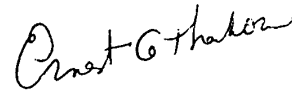
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later

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than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at  
telephone number (571) 272-1149.



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT  
December 16, 2002